

WHAT IS CLAIMED IS:

1. (amended) A method of accelerating receipt of data in a client-to-client network wherein each client in the client-to-client network operates a software program for implementing queries and providing responses, the method comprising the steps of:

- (a) — intercepting queries and responses in the client-to-client network;
- (b) — storing said intercepted queries and said intercepted responses in an acceleration server; wherein said storing said intercepted responses in said acceleration server includes storing a single intercepted response which originates in at least two separate and distinct clients;
- (c) — analyzing a direction of said intercepted responses in accordance with a caching policy;
- (d) — allowing transmission of a specific intercepted response to a client submitting a specific intercepted query only if a specific client which served as a source of said specific intercepted response is available on the client-to-client network and only if said specific client contains data identical to said specific intercepted response in a directory of said specific client and denying transmission of said specific intercepted response in all other cases; and

transmitting said intercepted responses to clients submitting intercepted queries.

2. (amended) The method of claim 1, wherein said step of transmitting includes the sub-steps of :

- (i) — ~~dividing a specific intercepted response of said intercepted responses into at least two packets; and~~
- (ii) — ~~transmitting said at least two packets to said clients submitting intercepted queries.~~

dividing a specific intercepted response of said intercepted responses into at least two packets; and transmitting said at least two packets to said clients submitting intercepted queries.

3. (original) The method of claim 1, wherein said step of intercepting is accomplished by a redirecting device.

4. (original) The method of claim 3, wherein said redirecting device is a layer 4 switch.

5. (original) The method of claim 1, wherein said acceleration server is located in a location selected from the group consisting of within a local area network and in a server belonging to an Internet Service Provider.

6. (original) The method of claim 1 wherein said queries are requests for data and said responses are data.

7. (original) The method of claim 6, wherein said data is in a format selected from the group of file types consisting of MP3, DVid, MPEG-2, MPEG-1, M-JPEG, MPEG-4, ActiveMovie/Video for Windows (.avi), QuickTime(.mov), RealVideo(.rm and .ram), H263.1, HTML, Flash, Gif, Tif, mpeguid and exe.

8. (original) The method of claim 1, wherein the software program includes at least two software programs.

9. (original) The method of claim 1, wherein said step of storing is accomplished by use of an algorithm.

10. (amended) The method of claim 9, wherein said algorithm includes analysis of at least one variable selected from the group consisting of temporal information, ordinal information, frequency information, client information ; and identification information.

~~consisting of :~~

- ~~\_\_\_\_\_ (i) — temporal information;~~
- ~~\_\_\_\_\_ (ii) — ordinal information;~~
- ~~\_\_\_\_\_ (iii) — frequency information~~
- ~~\_\_\_\_\_ (iv) — client information ; and~~
- ~~\_\_\_\_\_ (v) — identification information.~~

11. (original) The method of claim 10, wherein said temporal information includes at least one datum selected from the group consisting of time of initial storage, total residence time in storage, elapsed time since last retrieval from storage, average time between retrievals from storage and time of creation of an original file.

12. (original) The method of claim 10, wherein said ordinal information includes at least one datum selected from the group consisting of order of receipt and order of retrieval.

13. (original) The method of claim 10, wherein said frequency information includes at least one datum selected from the group consisting of frequency of retrieval and frequency of appearance in clients of said client-to-client network.

14. (original) The method of claim 10, wherein said client information includes at least one datum selected from the group consisting of client connection status, client identification, and presence of a specific data on a specific client.

15. (original) The method of claim 10, wherein said identification information includes at least one datum selected from the group consisting of file identification, client identification, and identification of content within a file.

16. (original) The method of claim 1, wherein a single query and a single response are each individually intercepted by at least two acceleration servers.

17. (original) The method of claim 1, wherein multiple acceleration server have a relative configuration selected from the group consisting of in series and in parallel.

18. (original) The method of claim 1, wherein said acceleration server is located in a location selected from the group consisting of within a local area network, on a server belonging to an Internet service provider, at a cable television provider junction, at a satellite relay link, and within an ADSL junction.

19. (original) The method of claim 1, wherein said step of transmitting a specific intercepted response to a client submitting a specific intercepted query occurs only if a specific client which served as a source of said specific intercepted response is available on the client-to-client network and only if said specific client contains data identical to said specific intercepted response in a directory of said specific client.

20. (original) The method of claim 2, wherein said sub-step of transmitting a specific packet of said at least two packets to a client submitting a specific intercepted query occurs only if a specific client which served as a source of said specific intercepted response is available on the client-to-client network and only if said specific client contains data identical to said specific intercepted response in a directory of said specific client.

21. (original) The method of claim 1, wherein said step of transmitting an intercepted response to a client submitting a specific intercepted query occurs only if a specific client which contains data equivalent to said specific intercepted response in a directory of said specific client is available on the client-to-client network.

22. (original) The method of claim 2, wherein said sub-step of transmitting a specific packet of said at least two packets to a client submitting a specific intercepted query occurs only if a specific client which contains data equivalent to said specific intercepted response in a directory of said specific client is available on the client-to-client network.

23. (original) The method of claim 1, wherein said acceleration server has a configuration selected from the group consisting of unidirectional and bi-directional.

24. (original) The method of claim 1, wherein said acceleration server further functions as a client in the client-to-client network.

25. (original) The method of claim 1, wherein said step of transmitting said intercepted responses to clients submitting intercepted queries includes simultaneous transmission of portions of a single data set from at least two of said acceleration servers.

26. (original) The method of claim 1, wherein said acceleration server acts as a transparent proxy server.

27. (original) The method of claim 1, wherein said step of transmitting a specific response of said intercepted responses begins while said step of intercepting is still in progress for said specific response.

28. (original) The method of claim 21, wherein said specific client which contains data equivalent to said specific intercepted response in a directory thereof comprises at least two separate and distinct clients.

29 (cancelled)

30. (amended) A system for accelerating receipt of data in a client-to-client network wherein each client in the client-to-client network operates a software program for implementing queries and providing responses, the system ~~comprising; comprising~~ at least one acceleration server designed and configured to:

(a) — intercept queries and responses in the client-to-client network wherein each of said queries and each of said responses contains unique identification information therein, said unique identification information facilitating interception thereof;

(b) — store said intercepted responses in said acceleration server; wherein each single intercepted response belonging to said intercepted responses in said acceleration server includes data which originates in at least two separate and distinct clients,

(c) — analyze a direction of said intercepted responses in accordance with a caching policy;

allow transmission of a specific intercepted response to a client submitting a specific intercepted query only if a specific client which served as a source of said specific intercepted response is available on the client-to-client network and only if said specific client contains data identical to said specific intercepted response in a directory of said specific client and denying transmission of said specific intercepted response in all other cases; and

transmit the responses to clients submitting intercepted queries.

31. (amended) The system of claim 30, wherein said at least one acceleration server is further designed and configured ~~for: (d)~~ for dividing a specific intercepted response of said intercepted responses into at least two packets; ~~and (e)~~ and transmitting said at least two packets to said clients submitting intercepted queries.

32. (original) The system of claim 30, wherein said acceleration server includes a redirecting device.

33. (original) The system of claim 32, wherein said redirecting device is a layer 4 switch.

34. (original) The system of claim 30, wherein said acceleration server is located in a location selected from the group consisting of within a local area network and in a server belonging to an Internet Service Provider.

35. (original) The system of claim 30, wherein said queries are requests for data and said responses are data.

36. (original) The system of claim 35, wherein said data is in a format selected from the group consisting of MP3, DViD, MPEG-2, MPEG-1, M-JPEG, MPEG-4, ActiveMovie/Video for Windows (.avi), QuickTime(.mov), RealVideo(.rm and .ram), H263.1, HTML, Flash, Gif, Tif, mpeguid and exe.

37. (original) The system of claim 30, wherein the software program includes at least two software programs.

38. (original) The system of claim 30, wherein an algorithm implements storage of intercepted responses on said acceleration server.

39. (amended) The system of claim 38, wherein said algorithm includes analysis of at least one variable selected from the group consisting of temporal information, ordinal information, frequency information, client information ; and identification information.  
~~consisting of:~~

- ~~\_\_\_\_\_ (i) temporal information;~~
- ~~\_\_\_\_\_ (ii) ordinal information;~~
- ~~\_\_\_\_\_ (iii) frequency information~~
- ~~\_\_\_\_\_ (iv) client information ; and~~
- ~~\_\_\_\_\_ (v) identification information.~~

40. (original) The system of claim 39, wherein said temporal information includes at least one datum selected from the group consisting of time of initial storage, total residence time in storage, elapsed time since last retrieval from storage, average time between retrievals from storage and time of creation of original file.

41. (original) The system of claim 39, wherein said ordinal information includes at least one datum selected from the group consisting of order of receipt and order of retrieval.

42. (original) The system of claim 40, wherein said frequency information includes at least one datum selected from the group consisting of frequency of retrieval and frequency of appearance in clients of said client-to-client network.

43. (original) The system of claim 39, wherein said client information includes at least one datum selected from the group consisting of client connection status, client identification, presence of a specific file on a specific client and presence of a packet derived from a specific file on a specific client .

44. (original) The system of claim 39, wherein said identification information includes at least one datum selected from the group consisting of file identification, packet identification, client identification, and identification of content within a file.

45. (original) The system of claim 30, wherein a single query and a single response are each independently intercepted by at least two acceleration servers of said at least one acceleration server.

46. (original) The system of claim 30, wherein multiple acceleration servers of said at least one acceleration server have a relative configuration selected from the group consisting of in series and in parallel.

47. (original) The system of claim 30, wherein said at least one acceleration server is located in a location selected from the group consisting of within a local area network, on a server belonging to an Internet service provider, at a cable television provider junction, at a satellite relay link, and within an ADSL junction.

48. (canceled)

49. (original) The system of claim 31, wherein said at least one acceleration server is further designed and configured to allow transmission of a specific packet of said at least two packets to a client submitting a specific intercepted query occurs only if a specific client which served as a source of said specific intercepted response is available on the client-to-client network and only if said specific client contains data identical to said specific intercepted response in a directory of said specific client.

50. (original) The system of claim 30, wherein said at least one acceleration server is further designed and configured to allow transmission of a specific intercepted response to a client submitting a specific intercepted query occurs only if a specific client which contains data equivalent to said specific intercepted response in a directory of said specific client is available on the client-to-client network.

51. (original) The system of claim 31, wherein said at least one acceleration server is further designed and configured to allow transmission of a specific packet of said at least two packets to a client submitting a specific intercepted query occurs only if a specific client which contains data equivalent to said specific intercepted response in a directory of said specific client is available on the client-to-client network.

52. (original) The system of claim 30, wherein said acceleration server has a configuration selected from the group consisting of unidirectional and bi-directional.

53. (original) The system of claim 30, wherein said acceleration server further functions as a client in the client-to-client network.

54. (original) The system of claim 30, wherein transmitting said intercepted responses to clients submitting intercepted queries includes simultaneous transmission of portions of a single data set from at least two of said acceleration servers.

55. (original) The system of claim 30, wherein said acceleration server is further designed and configured to act as a transparent proxy server.

56. The system of claim 30, wherein said acceleration server is further designed and configured to transmit a specific intercepted response while interception of said specific intercepted response is still in progress.

57. (original) The system of claim 50, wherein said specific client which contains data equivalent to said specific intercepted response in a directory thereof comprises at least two separate and distinct clients.

58. (cancelled)

59. (new) A method of accelerating receipt of data in a client-to-client network wherein each client in the client-to-client network operates a software program for implementing queries and providing responses, the method comprising the steps of:  
intercepting queries and responses in the client-to-client network;  
storing said intercepted queries and said intercepted responses in an acceleration server;  
analyzing a direction of said intercepted responses in accordance with a caching policy;  
allowing transmission of a specific intercepted response to a client submitting a specific intercepted query only if a specific client which served as a source of said specific intercepted response is available on the client-to-client network and only if said specific client contains data identical to said specific intercepted response in a directory of said specific client and denying transmission of said specific intercepted response in all other cases; and

transmitting said intercepted responses to clients submitting intercepted queries;  
wherein said queries and said responses each independently contain identification information including at least one datum selected from the group consisting of file identification and identification of content within a file.

60. (new) A system for accelerating receipt of data in a client-to-client network wherein each client in the client-to-client network operates a software program for implementing queries and providing responses, the system ~~comprising~~ ~~comprising~~ at least one acceleration server designed and configured to:

intercept queries and responses in the client-to-client network wherein each of said queries and each of said responses contains unique identification information therein, said unique identification information facilitating interception thereof;

store said intercepted responses in said acceleration server;

analyze a direction of said intercepted responses in accordance with a caching policy;

allow transmission of a specific intercepted response to a client submitting a specific intercepted query only if a specific client which served as a source of said specific intercepted response is available on the client-to-client network and only if said specific client contains data identical to said specific intercepted response in a directory of said specific client and denying transmission of said specific intercepted response in all other cases; and

transmit the responses to clients submitting intercepted queries;

wherein said queries and said responses each independently contain identification information including at least one datum selected from the group consisting of file identification and identification of content within a file.